

FIRST RECORDS FOR THE PAPERBARK CICADA *CICADETTA HACKERI* (DISTANT) AND *CICADETTA SPINOSA* (GODING & FROGGATT) (HEMIPTERA: CICADIDAE) FROM SYDNEY, NEW SOUTH WALES

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Abstract

Cicadetta hackeri (Distant) and *Cicadetta spinosa* (Goding & Froggatt) have been captured for the first time in the Sydney metropolitan area. *C. hackeri* is well-established but very localised, suggesting introduction, whereas evidence suggests that *C. spinosa* may have been resident in western Sydney for some decades.

Introduction

The paperbark cicada, *Cicadetta hackeri* (Distant), has been recorded from Bundaberg in southeastern Queensland to Port Stevens on the New South Wales north coast (Moulds 1990). Throughout its range, it inhabits paperbark or coastal teatree (*Melaleuca quinquenervia*), usually close to the coastline (Moulds 1990). In contrast, *Cicadetta spinosa* (Goding & Froggatt) has an inland distribution, with records from the Roma, Rolleston and Chinchilla regions of southern Queensland, through the Inverell, Narrabri and Nandewar Range areas of inland northern New South Wales, to Hay and northwestern Victoria (Moulds 1990). Adults are usually located high in eucalypts, especially ironbarks (J. Moss, pers. comm.).

Sydney records

One singing *C. hackeri* was netted on 4 Nov 2000 (Fig. 1) from a large paperbark bordering the roadway adjacent to the Killara golf course. A total of 58 exuviae were also collected: 36 of these had the darkened abdominal rings typical of *C. hackeri*, while the remainder were lighter and typical of *Cicadetta celis* Moulds. After dusk on 11 Nov 2000, twelve cicadas emerging on several paperbarks at the same location in Killara were collected and held individually with exuviae. Seven were *C. hackeri* (3 ♂♂, 4 ♀♀) and five were *C. celis* (2 ♂♂, 3 ♀♀); exuviae matched the identity of the specimens.

On 11 Nov 2000, the rather strange "creaking" sound of *C. spinosa* was heard twice only at a site along Luddenham Rd, St. Marys (J. Moss and S. Emery, pers. obs.). On 19 Jan 2001, eight cicadas were observed emitting the same sound at heights of 8-10 m in ironbark trees (*Eucalyptus fibrosa* and *E. siderophloia*) amongst bushland close to the suburb of Llandilo in western Sydney. Three males were captured in adjacent paperbarks on 24 Jan 2001 (Fig. 2), matching the photographs and descriptions in Moulds (1990). Unfortunately, subsequent heavy rain obliterated the cohort. During later visits to the location between 4-10 Feb 2001, two *Urabanana daemeli* Distant (1 ♂, 1 ♀; S. Emery) (Fig. 3) and three *U. verna* Distant (3 ♂♂; S. Emery) (Fig. 4) were taken: recent records for both are rare in the Sydney region.



Figs 1-4. (1) *Cicadetta hackeri*; (2) *C. spinosa*; (3) *Urabunana daemeli*; (4) *U. verna*.
Scale: (1) 2 x natural size; (2) 1.5 x natural size; (3-4) 2.5 x natural size.

Discussion

Considering the limited distribution of both *C. hackeri* and *Melaleuca quinquenervia* around the streets bordering the Killara golf course, it is possible that the cicada was introduced as eggs or larvae with host plants. The population is well established as evidenced by the quantity of exuviae and readily coexists with *C. celis* on the same host trees. While the population of *C. hackeri* appears geographically isolated by the extent of the paperbarks, *C. celis* is widespread in *Melaleuca* and *Leptospermum* trees and shrubs in the Sydney region. This record from Killara extends the distribution of *C. hackeri* around 150 km further south from its previous limit at Port Stevens.

Given the large numbers of *C. spinosa* and its presumptive presence at St Marys and Llandilo (ca 20 km linear distance apart), it is also highly likely that this species has been present in the region for some time. Both a visual sighting and song identification of this species occurred on 24 Dec 1982 at McGrath's Hill, close to the current location, but a specimen was not captured (J. Moss, pers. comm.). Additional evidence that the population of *C. spinosa* has remained undetected since 1982 is provided by the capture of both *U. daemeli* and *U. verna* at the same location. These species also have no records from the Sydney region for over two decades; the most recent records were at Hornsby Heights (1 ♂, 10 Jan 1970; 2 ♂♂, 25 Nov 1971, J. Moss) and Terrey Hills (1 ♂, 7 Dec 1997, N. Emery) (*U. daemeli*) and in the Casula-Blacktown area (2 ♂♂, 2 ♀♀, 10 Jan 1970, J. Moss) (*U. verna*). As well as providing the first specimens of *C. spinosa* from the Sydney region, the records are the first recorded east of the Great Dividing Range in New South Wales for this species (see Moulds 1990). An additional six specimens (5 ♂♂, 1 ♀) were captured by the authors at the same location between 18 Jan and 2 Feb 2002.

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References

- MOULDS, M.S. 1988. The status of *Cicadetta* and *Melampsalta* (Homoptera: Cicadidae) in Australia with the description of two new species. *General and Applied Entomology* 20: 39-48.
- MOULDS, M.S. 1990. *Australian cicadas*. NSW University Press, Sydney; x + 217 pp.